

STATE OF VERMONT  
PUBLIC SERVICE BOARD

Docket No. 7730

Petition of Vermont Electric Power Company, Inc.	)	Hearing at
and Vermont Transco LLC (collectively known as	)	Montpelier, Vermont
"VELCO"), for a certificate of public good,	)	September 2, 2011
pursuant to 30 V.S.A. § 248, authorizing: (1) the	)	
installation of two variable shunt reactors at the	)	
Coolidge Substation in Ludlow, Vermont; (2)	)	
installation of one variable shunt reactor at the	)	
New Haven Substation; and (3) relocation of an	)	
existing static shunt reactor from the New Haven	)	
Substation to the Vernon Substation	)	

Order entered: 10/14/2011

PRESENT: Jay E. Dudley, Hearing Officer

APPEARANCES: Joslyn Wilschek, Esq.  
William B. Piper, Esq.  
Primmer Piper Eggleston & Cramer PC  
for Vermont Electric Power Company, Inc..

Geoffrey Commons, Esq.  
for Vermont Department of Public Service

Donald J. Einhorn, Esq.  
Judith Dillion, Esq.  
for Agency of Natural Resources

**I. INTRODUCTION**

This case involves a petition filed with the Vermont Public Service Board ("Board") by Vermont Electric Power Company, Inc. and Vermont Transco LLC (collectively known as "VELCO" or "Petitioners") on March 21, 2011. VELCO requests approval, pursuant to

30 V.S.A. § 248, authorizing the installation of two variable shunt reactors at the Coolidge Substation in Ludlow, Vermont; the installation of one variable shunt reactor at the New Haven Substation in New Haven, Vermont; and the relocation of an existing static shunt reactor from the New Haven Substation to the Vernon Substation in Vernon, Vermont (collectively the "Project").

In this Proposal for Decision, I recommend that the Board approve the proposed Project and issue a CPG to the Petitioner authorizing construction of the Project, with conditions.

## **II. PROCEDURAL HISTORY**

On March 21, 2011, VELCO filed its petition along with supporting prefiled testimony and exhibits.

On April 19, 2011, the Clerk of the Board noticed a prehearing conference in this matter for April 28, 2011.

On April 21, 2011, the Windham Regional Commission ("WRC") filed comments concerning the Vernon Substation portion of the Project. In its filing, WRC outlined concerns regarding noise from the shunt reactor and the continued development of the Vernon Substation as it relates to available space for future spent fuel storage from the Vermont Yankee nuclear facility.

On April 28, 2011, a prehearing conference was held in this Docket. Appearances were entered by: William B. Piper, Esq., and Joslyn L. Wilschek, Esq., Primmer Piper Eggleston & Cramer PC, for VELCO; Geoffrey Commons, Esq., for the Vermont Department of Public Service ("Department"); and Judith Dillon, Esq. and Donald J. Einhorn, Esq., for the Vermont Agency of Natural Resources ("ANR").

No motions to intervene were filed.

On May 10, 2011, VELCO filed supplemental prefiled testimony of Gerald W. Ostrander in order to provide the Hearing Officer with VELCO's noise studies and a response to WRC's filing of April 21.

On June 7, 2011, a site visit was held at VELCO's Vernon substation. A public hearing was held that same evening at 7:00 P.M. at the Town of Vernon Municipal Office Building. Eight members of the public attended the public hearing and three signed up to speak. Those

members of the public who spoke asked questions regarding the need for the Project and noise levels.

On June 8, 2011, a site visit was held at VELCO's Coolidge substation. A public hearing was held that same evening at 7:00 P.M. at the Town of Ludlow Community Center. No members of the public attended the site visit. Three members of the public attended the public hearing and two signed up to speak. Those members of the public who spoke raised concerns about noise.

On June 9, 2011, a site visit was held at VELCO's New Haven substation. A public hearing was held that same evening at 7:00 P.M. at the New Haven Town Hall. No members of the public attended the public hearing.

On June 17, 2011, the Clerk of the Board issued a memorandum informing VELCO that additional information was needed concerning proposed blasting at the Coolidge Substation site.

On July 12, 2011, VELCO filed the Second Supplemental testimony of Gerald W. Ostrander, in response to the Board's memorandum of June 17.

On August 1, 2011, I issued an Order approving a protective agreement that was executed by all of the parties. Also on August 1, I issued an Order approving a motion filed by the Petitioners to provide confidential treatment to selected exhibits containing Critical Energy Infrastructure Information ("CEII").

On August 12, 2011, VELCO filed a Memorandum of Understanding (the "MOU") between itself, the Department, and ANR in which all the parties agreed that the Board should issue a CPG authorizing the construction of the Project. In addition, the parties waived the opportunity for review of the Proposal for Decision, briefing, and oral argument, in accordance with 3 V.S.A. § 811.

On August 15, 2011, the Clerk of the Board issued a memorandum informing VELCO that additional information was needed concerning VELCO's Material Safety and Data Sheet ("MSDS") and the lead content of the blasting materials proposed to be used at the Coolidge Substation site.

On August 22, 2011, VELCO filed its response to the Board's memorandum which included VELCO's MSDS labeled as "Attachment 1."

On September 2, 2011, a technical hearing was convened in the Board's 4<sup>th</sup> floor hearing room in Montpelier, Vermont. At the hearing, VELCO agreed to investigate whether or not it had the capacity to test for lead compounds both pre-construction and post construction at the Coolidge Substation site.

On September 8, 2011, VELCO filed a letter with the Board confirming that VELCO will test for lead and lead compounds in water wells prior to and after construction at the Coolidge site.

### **III. FINDINGS**

Based on the substantial evidence of record and the testimony presented at the technical hearing, I hereby report the following findings to the Board in accordance with 30 V.S.A. § 8.

#### **Background and Project Description**

1. VELCO is a company as defined in 30 V.S.A. § 201, and as such is subject to the Board's jurisdiction pursuant to 30 V.S.A. § 203. Petition at 1.
2. VELCO's offices are located at 366 Pinnacle Ridge Road, Rutland, Vermont. Petition at 1.
3. VELCO operates Vermont's high-voltage transmission system and seeks to ensure the integrity of the portion of the regional bulk power system for which it is responsible, and to ensure adequate and reliable transmission of electricity to the eighteen electric distribution utilities that it serves in Vermont. Petition at 1.
4. VELCO is proposing to install three new variable shunt reactors, and to relocate one existing static shunt reactor, in three of its substations. VELCO designed this Project to enhance the VELCO and regional transmission systems' reliability by controlling high system voltages under light load conditions and various system generation dispatches, and to improve the systems' capacity to provide adequate electric supply to meet present and forecasted demand during all conditions, including those of equipment maintenance and failure. VELCO will own and manage the Project, which includes designing, constructing and maintaining all of the Project facilities. Ostrander pf. at 2; Diebold pf. at 4.

5. Specifically, VELCO will purchase three variable shunt reactors and integrate these reactors in a realignment of the existing voltage compensation on the Vermont bulk transmission system. When complete, the realignment will consist of:

- The installation of two variable shunt reactors at the VELCO Coolidge Substation located in the towns of Ludlow and Cavendish;
- The replacement of an existing fixed shunt reactor with a new variable shunt reactor in the VELCO New Haven Substation;
- The installation in VELCO's Vernon Substation of the fixed shunt reactor that is removed from New Haven.

Diebold pf at 5.

6. Immediately after receiving a CPG, VELCO will commence installation of the reactors at the VELCO Coolidge Substation. One of the Coolidge reactors is scheduled to be commissioned in December, 2011 and the second in January, 2012. VELCO will then be able to remove the existing reactor at the New Haven Substation and move it to the VELCO Vernon substation; VELCO will then install the new variable reactor at New Haven. The scheduled dates for completion of the Vernon and New Haven portions of the Project are March, 2012 and June, 2012, respectively. Ostrander pf. at 3; exh. VELCO-Ostrander-3.

7. The budget estimate for the Project is \$20.3 million. Project costs break down into seven components: Material, Labor, Equipment, Indirects, Escalation, Capital Interest, and Contingency. Major assumptions were: (1) a less-than-six-month Section 248 permitting process; (2) no regulatory permits, other than the CPG, stormwater run-off and a Septic System amendment at Coolidge required for construction; and (3) obtaining a combination of contractors and VELCO work crews to construct the Project. Ostrander pf. at 3-4; exh. VELCO-Ostrander-4, Cost Estimate.

8. The Project has been developed in accordance with the transmission planning requirements approved in the Memorandum of Understanding of Docket 7081. VELCO has conducted a Non-transmission Alternative screening as required in the 7081 MOU and updated the Vermont System Planning Committee at its quarterly meeting in March, 2011. Ostrander pf. at 6.

**Blasting**

9. VELCO will need to blast at Coolidge to level the expansion area, install the fence drainage system, and install the necessary equipment. Ostrander second supp. pf. at 3.

10. Licensed and certified blasting technicians will perform the blasting. VELCO will ensure that all blasting associated with construction will only occur between 9:00 A.M. and 5:00 P.M., Monday through Friday, with the exception of state holidays when no blasting will occur. VELCO will conduct an exploratory study which will include subterranean ledge probing. This study will provide information that will be used to minimize the amount of blasting. VELCO will perform all blasting in accordance with any and all applicable laws and regulations, including the U.S. Department of Interior Rules 816.61-68 and 817.61-68 and the Blasting Guidance Manual, Surface Mining, Regulation and Enforcement, issued by the U. S. Department of Interior, to limit peak velocity and ground vibration to safe levels. Noise and air blast effects will be limited through application of proper techniques. Mats will be used to limit flying rock and debris. Ostrander second supp. pf. at 3.

11. VELCO's pre-blast protocol will include a public information meeting and pre-blast surveys of nearby properties. Specifically, VELCO will invite landowners within one-half mile of the Coolidge Substation (see exhibit VELCO-Ostrander-Supp2-1) to a public information meeting to be held at least 30 days prior. The purpose of this meeting will be to provide updates on the Project and address concerns related to blasting. During this meeting, VELCO will inform landowners and interested parties about the pre-blast survey process. Ostrander second supp. pf. at 4.

12. Before blasting occurs, VELCO will conduct pre-blast surveys on all properties within one-half mile of the blast site. (The pre-blast survey is used to differentiate between pre-existing damage and damage resulting from the blasting, should a damage claim arise). The survey will include an inspection of all real property (e.g., structures, retaining walls, water wells) within one-half mile of the blast site, and upon request VELCO will also conduct a pre-blast survey for real property within one-half mile of the blast site. Ostrander second supp. pf. at 4; tr. 9/02/11 at 25 (Werner).

13. VELCO will need to blast as soon as possible after receipt of the CPG to maintain its

proposed schedule. VELCO will conduct pre-blast surveys for landowners within one-half mile of the Coolidge site, upon the request and consent of landowners, at least 10 days prior to the start of blasting. Ostrander second supp. pf. at 5.

14. VELCO will certify by letter that it has complied with the terms of its blasting plan and, after blasting and mitigation, if any, are completed, VELCO will report to the Board on the results of its blasting at the Coolidge site. Ostrander second supp. pf. at 5.

15. The detonators to be used in the proposed blasting at the Coolidge site contain small quantities of a compound known as lead azide. Upon detonation, the lead azide is transformed into the compound lead oxide. The amount of lead azide contained in each detonator is approximately 50 milligrams. VELCO will conduct both pre-construction and post-construction well-water tests to test for lead compounds and byproducts. Tr. 9/2/11 at 15-16 (Werner); tr. 9/2/11 at 21-22 (Ostrander); attch. 1 Shock-Star Non-electric Detonators; letter of VELCO dated 9/8/11.

### **Discussion**

I recommend that the Board require VELCO to follow blasting notice requirements similar to those that the Board established in other recent proceedings.<sup>1</sup> Therefore, I recommend that VELCO be required to send a certified letter, with return receipt requested, to each property owner within one-half mile that explains why pre- and post-blast surveys and well monitoring is being offered and provide the contact information for a person that is able to answer questions that property owners may have regarding the notice and surveys. In addition, due to known quantities of the compound lead azide contained in the detonators, although apparently minute, I recommend that VELCO be required to conduct both pre-construction and post-construction well-water tests within the one-half mile blast radius to test for lead contaminants and byproducts. VELCO should provide copies of the results of those tests to the Board, the Department, and ANR.

### **The MOU**

16. On August 12, 2011, VELCO, the Department and ANR (collectively, "the Parties") submitted an MOU, in which the parties agree that the Board should issue a CPG for the

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1. See Docket No. 7628, Order of 7/19/2011; and Docket No. 7508, Order of 4/11/2011.

proposed Project. MOU of 8/12/11 at 2.

17. The Parties agree the Project is consistent with the general good of the State of Vermont and will not have an adverse effect on Vermont ratepayers. *Id.*

**Orderly Development of the Region**

[30 V.S.A. § 248(b)(1)]

18. The proposed Project will not unduly interfere with the orderly development of the region, as supported by Findings 19 through 24, below.

19. This Project is consistent with the plans of the Towns of Ludlow, Cavendish, New Haven and Vernon, Vermont, and the three regional Planning Commissions: the Windham Regional Commission; the Addison County Regional Planning Commission; and the Southern Windsor County Regional Planning Commission. Ostrander pf. at 7.

20. The Ludlow Town Plan Electrical Services Goals and Implementation sections include statements that the placement of electric lines and facilities should be evaluated for health, safety and aesthetic concerns. The Plan also encourages the use of existing infrastructure and services, and efforts to improve efficiency and reduce peak demands, as well as ensuring a supply of safe, sufficient electricity to meet the needs of residents, businesses, industries, and visitors at a reasonable cost. The proposed Project uses existing substation sites and improves system reliability. Ostrander pf. at 8; exh. VELCO-Ostrander-7.

21. The Cavendish Town Plan encourages multipurpose use of utility corridors, states that new utility lines should be placed along existing corridors whenever possible, and provides that location or relocation of utility lines should not have a negative impact upon aesthetic and natural resources. Ostrander pf. at 8; exh. VELCO-Ostrander-8.

22. The Southern Windsor County 2009 Regional Plan states that efficient infrastructure adequate to support economic or other growth should be created prior to development. The Plan also states that it is important to place transmission lines and substations in areas that have been designated as desirable for growth. The substation upgrade VELCO is proposing at the Coolidge Substation located in Cavendish and Ludlow includes the use of existing substation land, has been designed to minimize any potential impacts, and is consistent with the local and regional goals. Ostrander pf. at 9, exh. VELCO-Ostrander-9.



23. The New Haven Town Plan includes a goal to discourage new public utility expansion, including, but not limited to, expanded/upgraded electric transmission facilities, that may have an adverse impact on viable agricultural operations and environmentally sensitive areas, that poses health risks to citizens, that poses threats to property or property values, or that degrades scenic corridors and existing aesthetics. The Addison County Regional Planning Commission's goals call for utility services not to cause undue adverse impacts on health, safety or environmental quality. Those goals promote fully utilizing existing infrastructure and rights-of-way to meet the region's energy needs before additional infrastructure is built or new rights-of-way are acquired. The goals also encourage co-location of energy transmission and distribution lines in the same corridors. The proposed upgrade in the New Haven Substation does not require an expansion of the existing yard, but replaces an existing shunt reactor. The Project meets the overall goals for transmission planning in both the town and regional plans. Ostrander pf. at 9-10; exh. VELCO-Ostrander 10 and 11.

24. The Vernon Town Plan encourages public utilities to use existing corridors in order to minimize environmental impacts and to assist desired development patterns. The Town Plan and Windham Regional Plan generally encourage the minimization of physical and visual impacts on the landscape. The Windham Regional Plan's preference is to use existing transmission and distribution corridors rather than create new corridors, and to avoid the extension or alteration of energy facilities that would significantly impact "Resource lands" or significantly diminish important natural resource values. The Windham Regional Plan appears to require that new energy transmission or distribution facilities only be constructed when needed, and then only within or adjacent to existing operational energy transmission facility corridors to the maximum extent possible. The proposed upgrades fit within the existing fence, will create minimal impacts to the area, and will improve the electric sub-transmission and distribution system. Ostrander pf. at 10, exhs. VELCO-Ostrander 12, 13, and 14.

**Need for Present and Future Demand for Service**

[30 V.S.A. § 248(b)(2)]

25. The Project is required to meet the present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation

programs and measures and energy efficiency and load management measures. This finding is supported by findings 26 through 40, below.

26. Without the Project, VELCO would violate reliability and operational procedures set out by the Independent System Operator for New England, Inc. ("ISO-NE" or "ISO"). Also, the Project is required to meet reliability standards established by the North American Electric Reliability Council ("NERC"), including NERC planning Standard TPL-001 "System Performance Under Normal Conditions," Standard TPL-002 "System Performance Following the Loss of a Single BES Element," and Standard TPL-003 "System Performance Following Loss of Two or More BES Elements." Diebold pf. at 5-6.

27. The Project is designed to address unacceptably high voltage on the bulk transmission system during low load periods. Regional voltage criteria require that during base-case conditions and post-contingency conditions, system voltages must remain within a predetermined voltage bandwidth. For the bulk regional transmission system, the requirement is to maintain acceptable voltage magnitudes and to operate the transmission system such that the system response to unplanned and planned system events is within predetermined and acceptable limits. Diebold pf. at 9.

28. High voltages occur for a number of reasons. High voltages can result from the failure of a particular system element or when there are insufficient resources available on the system to control the voltage. High voltages can also occur when high-voltage transmission lines are lightly loaded. In addition, high voltages occur when a combination of these system conditions occur simultaneously. Diebold pf. at 9.

29. During light load periods when power flow on transmission lines is low, transmission lines can "behave" like capacitors and lift system voltages to unacceptable levels. Capacitors produce capacitive energy, as do lightly loaded high-voltage lines. If uncompensated, this capacitive energy contributes to high voltages. To reduce this effect, utilities must compensate for the "excess" capacitive energy. Diebold pf. at 9-10.

30. During periods when system voltages cannot be maintained below required levels, the ISO and/or the regional operation centers such as VELCO must use mitigation resources available on the transmission system to bring the voltages within acceptable limits. Use of these

mitigating resources may require the system to operate in a non-optimal manner. It is critical to correct high voltage situations promptly to protect VELCO equipment. Diebold pf. at 10.

31. The primary area of need is the VELCO transmission system that covers Windham, Windsor, Rutland and Addison counties in Vermont. The Project substation busses are where the high voltages manifest. By correcting this problem, the nearby lower-voltage transmission system served by the Project substations will experience the voltage control benefits of the Project, as they would experience the negative system conditions associated with the high voltage if the proposed corrective action is not taken. Diebold pf. at 5.

32. VELCO needs to distribute the shunt reactors among the three substations identified because the need is a function of the entire bulk transmission system. Installing two reactors at Coolidge and one each at New Haven and Vernon provides the least-cost and most efficient method to control voltage. The series of reactors, per reliability criteria, must be capable of performing their functions even if one is unavailable. They must provide sufficient voltage control such that there is sufficient control capability even when any of the interconnecting transmission lines is unavailable. By distributing the reactors spatially across multiple substations, the Project provides adequate voltage control and coverage for the loss of other reactor units as well as loss of other system elements. Diebold pf. at 10-11.

33. The installation of the reactors at different locations also supports the construction sequencing. For example, there must be sufficient reactive capacity at the Coolidge substation to provide adequate control of the New Haven voltage during the reactor change-out at New Haven. Shunt reactors are required at these three substations as part of a coordinated support system. Each reactor installed as part of the Project supports the other reactors both in maintaining appropriate voltages and as back-up for the long-term loss of any one reactor. Diebold pf. at 10-11.

34. The two reactors at Coolidge will provide voltage control for the loss of the reactor at New Haven and provide voltage control at Coolidge when the interconnecting lines are de-energized. Diebold pf. at 11.

35. VELCO needs to install variable shunt reactors, rather than fixed reactors at the Coolidge and New Haven Substations. The variable reactors have the ability to vary their

MVAR output and thus control the level to which they will contribute to controlling high voltages on the bulk system. The variable reactors VELCO will install have On Load Tap Changers that allow varying their MVAR output when at nominal voltage from 60 MVARs down to 34 MVARs. Diebold pf. at 7-8.

36. The primary reason for choosing variable reactors relates to the transmission system response when a reactor is switched in and out of service. VELCO maintains a limit on the magnitude of voltage change before and after switching any shunt-connected device in or out of service. This limit is 2 percent of nominal voltage in the base case. Reactors are sized relative to the number of MVARs they can produce. The new reactors as well as the existing New Haven reactor have a maximum rated output of 60 MVARs at nominal voltage. The magnitude of the voltage change resulting from switching a reactor in or out is directly related to the reactor's "size" or number of MVARs when the switching occurs. At 60 MVARs the voltage changes an unacceptable 2.5 percent. The variable reactors allow the operating MVAR value to be varied prior to switching the individual reactor units in and out of service, thus controlling the voltage change for the switching event. Also, the ability to control the magnitude of produced MVARs can provide voltage control on the bulk transmission system. Diebold pf. at 8-9.

37. The installation of the fixed reactor at Vernon will support the control of voltage when New England dispatch and system conditions cause concern for high voltages. This part of the transmission system is stronger, and switching the fixed reactor in and out of service will result in more modest voltage changes, such that a static shunt reactor is acceptable at the Vernon substation. Diebold pf. at 12.

38. Not only will the Project correct system high voltage concerns in a manner consistent with ISO-NE, NERC and Northeast Power Coordinating Council, Inc. ("NPCC") planning guidelines but, by the use of variable reactors and by locating them at multiple substations, the Project will provide the ability to adjust voltages as necessary along the subject transmission system corridor. This provides the ability to assist in controlling the lower transmission voltage system elements for the areas surrounding the corridor. *Id.*

39. The proposed upgrades are needed now because the high voltage conditions can occur now. *Id.*

40. The same benefits could not be achieved in a more cost-effective manner by efficiency, generation, conservation or other load management measures. Unlike virtually all of VELCO's prior transmission system upgrades, these shunt reactors are needed primarily to control voltage in periods of light load on the system. Short of building generation that would need to be operated out of merit, at great local cost, there is no other cost-effective way to address the problem. Even the use of new generation would be impractical. Interconnection requirements for generators (other than wind units) require that they maintain minimal reactive capability in ratio to their real power capability. What this means is that to meet the reactive requirements necessary to control voltage, the generator capacity installed would need to be in excess of 700 MW. Multiple generator installations would be necessary to provide required back-up capability. Alternatives such as increasing load are impractical in that a large load increase would be required during normally light load periods. Devices such as Static Condensers and Synchronous Condensers are technically viable but would be unnecessarily expensive. Diebold pf. at 13-14.

#### **System Stability and Reliability**

[30 V.S.A. § 248(b)(3)]

41. The proposed Project will not have an adverse impact on system stability and reliability. This finding is supported by findings 42 through 44, below.

42. VELCO's transmission system planning analysis indicates that the Project will have no adverse impact on the stability and reliability of the VELCO transmission system. In fact, the Project should improve system performance by controlling voltage, especially during low load periods. VELCO has also determined that construction related to installation of the Project will not have a negative impact on system stability and reliability. Diebold pf. at 13.

43. ISO-NE is aware of and supports the Project and has assisted VELCO in identifying the potential problems and the solution that VELCO is proposing. VELCO introduced the Project to the New England stakeholder community and the relevant task forces have determined that the Project will not have an adverse impact on the regional transmission grid. These are required steps in the ISO-NE/NPCC process for implementing reliability-based projects. Upon completion of this New England ISO process VELCO anticipates full regional cost treatment for

the Project. Diebold pf. at 20.

44. The NEPOOL Reliability Committee, which advises ISO-NE through the NEPOOL Participants Committee, supports the Project. Exhibit VELCO-Ostrander-2, Reliability Committee Actions. VELCO will file the ISO-NE I.3.9 Proposed Plan Application Approval Letter upon receipt. Ostrander pf. at 3.

**Economic Benefit to the State**

[30 V.S.A. § 248(b)(4)]

45. The proposed Project will result in an economic benefit to the state. This finding is supported by finding 46, below.

46. This Project creates economic and reliability benefits to the citizens of Vermont because it is the least-cost alternative to resolve the identified pressing reliability needs. By improving the reliability of the Vermont and regional electrical system, the Project will avoid the costs and potential reliability problems associated with other means of controlling voltage. Ostrander pf. at 11.

**Aesthetics, Historic Sites, Air and Water Purity,  
the Natural Environment and Public Health and Safety**

[30 V.S.A. § 248(b)(5)]

47. The proposed Project will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment, and public health and safety, subject to, and upon compliance with, the conditions set forth below. This finding is supported by findings 48 through 84, below, which give due consideration to the criteria specified in 10 V.S.A. § 1424a(d) and 10 V.S.A. §§ 6086(a)(1) through (8) and (9)(K).

**Outstanding Resource Waters**

[10 V.S.A. § 1424(a)(d)]

48. The proposed Project does not require construction activity in the vicinity of any Outstanding Resource Waters as designated by the Water Resources Board, under 10 V.S.A. Section 1424(a). Tomberg pf. at 4.

**Water and Air Pollution**  
**[10 V.S.A. § 6086(a)(1)]**

49. The Project will not result in undue water or air pollution. This finding is supported by findings 50 through 58, below.

50. During the construction phase of the Project, air emissions from construction equipment and diesel and gasoline-powered support vehicles will be similar to past VELCO projects and usages at these sites. As all earthwork is proposed within the existing substation yards or adjacent transmission rights-of-way, limited tree clearing is anticipated. VELCO will take dust-control measures when necessary, which will consist of the application of water and/or calcium chloride on the unpaved areas disturbed during construction. Consequently, no undue adverse air pollution will result from construction activities. Tomberg pf. at 4-5.

51. VELCO commissioned Kenneth Kaliski, P.E., Q.E.P, of Resource Systems Group, to conduct pre-construction noise studies to determine sound levels at the closest neighbors. These studies are included in Exhibits VELCO-Ostrander-Supp-1 (Coolidge), Supp-2 (New Haven) and Supp-3 (Vernon). Ostrander pf. at 12.

52. The Coolidge noise report concludes that " . . . the change in sound pressure level resulting from the addition of shunt reactors is not expected to be noticeable at the nearest residences. No additional mitigation is recommended at this time." Ostrander supp. pf. at 2; exh. VELCO-Ostrander-Supp-1.

53. The New Haven noise report concludes that,

Modeled post-construction sound pressure levels for the closest residence to the New Haven substation were 32 dBA with fans off and 36 dBA with fans on. These levels are one to two decibels lower than modeled existing conditions. This is because the new shunt reactor has a lower sound power level than the unit currently in use. Modeled 1/3 octave band levels were also analyzed to determine the change in tonal noise at the residence. Results show that, at each frequency, sound levels under the proposed conditions are lower than or equal to existing levels.

Ostrander supp. pf. at 2; exh. VELCO-Ostrander-Supp-2.

54. The Vernon noise report concludes that, " . . . the change in sound pressure level resulting from the shunt reactor is not expected to be noticeable at the nearest residence. No additional mitigation is recommended at this time." Ostrander supp. pf. at 3; exh. VELCO-

## Ostrander-Supp-3.

55. VELCO will perform post-construction noise studies after it commissions the reactors at each substation and will mitigate noise levels if post-construction studies find higher noise levels. Ostrander pf. at 12; Ostrander supp. pf. at 3.

56. Prior to conducting the post-construction noise studies, VELCO's noise expert will consult with the Department's noise expert regarding the content and methodology of those studies. The studies will be sufficient to assess the extent of tonal noise and the total noise from the substations. MOU at 4.

57. There are no stream impacts proposed as part of this Project. Additionally, the Coolidge and Vernon Substations have existing construction stormwater discharge permits (5942-9020 and 3653-INDC, respectively), which will be appropriately amended to ensure proper permit "coverage" for the earth-disturbing work needed for the installation of the shunt reactors. The Vernon substation currently has a stormwater operational permit (#3653-9015.A1). VELCO will retain an environmental consultant to obtain appropriate amendments to the permits, as needed. Construction at the New Haven Substation will be on the stabilized substation pad within the substation fence and, as such, will be below state stormwater permitting thresholds. VELCO will conduct construction activities pursuant to the VELCO Environmental Guidance Manual - 2008 ("VEGM"), which contains erosion prevention and sedimentation control ("EPSC") measures. VELCO will also update the Spill Prevention and Countermeasure Control ("SPCC") Plan for applicable oil-containing equipment at each substation. Tomberg pf. at 5.

58. VELCO will need to blast at the Coolidge Substation to level the expansion area, install the fence drainage system, and install equipment. Noise and air blast effects will be limited through application of proper techniques. Mats will be used to limit flying rock and debris. The detonators to be used in the blasting are known to contain minute quantities of the compound lead azide. VELCO will conduct both pre-construction and post-construction well-water tests within the blast radius of one-half mile to test for lead contaminants and byproducts. Ostrander second supp. pf. at 3; tr. 9/2/11 at 15-22 (Werner/Ostrander); letter of VELCO to Board dated 9/8/11.



**Discussion**

VELCO has indicated that it will utilize dust-control techniques as necessary during construction. I recommend that any water to be used for dust suppression be required to be brought in from off-site.

**Headwaters**

[10 V.S.A. § 6086(a)(1)(A)]

59. The proposed Project will not result in an undue, adverse impact to any of Vermont's headwaters. This finding is supported by finding 60, below.

60. Each of the three substations has previously been reviewed under Section 248, in either the Northwest Vermont Reliability Project ("NRP") proceeding (Docket No. 6860) or the Southern Loop proceeding (Docket No. 7373). Those reviews determined that the substation projects would have no adverse impact on any headwaters. The Project's areas range from approximately 260-1300 feet above mean sea level (amsl), and consist of relatively flat or gently sloping terrain with limited steep slopes (steep slopes in Vermont are generally considered those greater than 15 percent). As noted above, Coolidge and Vernon are covered under Vermont stormwater permits, and work at New Haven will be conducted in accordance with the VEGM, which will maintain water quality standards. As construction will be located within and/or immediately adjacent to existing electrical facilities, no stream impacts are anticipated. As such, no undue adverse impacts to headwaters will result from the construction of the Project. Tomberg pf. at 6, exh. VELCO-Tomberg-2, pp. 5-7.

**Waste Disposal**

[10 V.S.A. § 6086(a)(1)(B)]

61. The Project will meet applicable Department of Environmental Conservation regulations regarding the disposal of wastes. This finding is supported by findings 62 through 63, below.

62. VELCO will design and install a secondary oil-containment system for each shunt reactor in accordance with federal spill prevention and control rules and guidelines (40 CFR 112) and develop, or update as necessary, an appropriate site-specific SPCC Plan for each Project

facility. Also, work at the Coolidge Substation will require the relocation of the facility's existing septic leach field to a nearby upland location; the exact location will be determined as part of an amendment to the existing Wastewater Permit, WW-2-1319. Pursuant to state regulations, a replacement leach field will be installed and the existing leach field will be appropriately decommissioned. As the Project will be located within existing substations and transmission rights-of-way, any required vegetation clearing will be conducted pursuant to VELCO's Vegetation Management Cycle. Construction debris will be handled in accordance with the applicable Department of Environmental Conservation waste management rules. Tomberg pf. at 6-7; exh. VELCO-Tomberg-2 at 7; VELCO response to ANR1-3.

63. A portion of the rubble resulting from the proposed blasting at the Coolidge Substation will remain on-site while the majority of the material will be shipped off-site to a licensed facility. Tr. 9/2/11 at 18 (Ostrander).

#### **Water Conservation**

[10 V.S.A. § 6086(a)(1)(C)]

64. The proposed Project will not require the connection to, or use of, water supplies beyond limited water application during construction (e.g., dust control, mixing concrete, etc.). Water usage at the substations will only increase temporarily during Project construction, but will be minimal following Project completion, as the substations will not be manned. The Project, when constructed, will not result in the increased use of water at any of the three existing substations. Tomberg pf. at 7-8; exh. VELCO-Tomberg-2 at 7-8.

#### **Discussion**

I recommend the Board require the Petitioners, as a condition of approval, that any water to be used for dust suppression purposes must be brought in from off-site.

#### **Floodways**

[10 V.S.A. § 6086(a)(1)(D)]

65. VELCO has previously reviewed each substation site as part of Section 248 reviews, and none of the substations was determined to adversely impact any floodways. As VELCO is not proposing any significant expansions to the Project area, the proposed Project will have no impact on floodways. Tomberg pf. at 8; exh. VELCO-Tomberg-2 at 8.

**Streams**

[10 V.S.A. § 6086(a)(1)(E)]

66. The Project will maintain the natural condition of affected streams and will not endanger the health, safety, or welfare of the public or adjoining landowners. This finding is supported by finding 67, below.

67. VELCO evaluated each substation during previous Section 248 reviews, and did not identify any regulated streams within the Project area. Additionally, work activities at the Coolidge and Vernon Substations will be subject to coverage under Vermont construction stormwater authorizations 5942-9020 and 3653-INDC, respectively. As VELCO will perform earthwork at the New Haven Substation within the existing substation yard, stormwater coverage is not necessary. Nevertheless, VELCO will perform the work in accordance with the environmental impact and minimization measures outlined in the VEGM. Tomberg pf. at 8-9; exh. VELCO-Tomberg-2 at 8-9.

**Shorelines**

[10 V.S.A. § 6086(a)(1)(F)]

68. The Project will not have an undue adverse affect on shorelines. This finding is supported by finding 69, below.

69. VELCO has previously evaluated each substation site as part of the Section 248 review for the substations, and determined that none adversely impacted shoreline resources. As Project activities and infrastructure are located on lands which currently support such uses and no significant expansions or vegetative clearing is proposed, no undue adverse impacts to shorelines will result from the Project. Tomberg pf. at 9; exh. VELCO-Tomberg-2 at 9.

**Wetlands**

[10 V.S.A. § 6086(a)(1)(G)]

70. The Project will not violate any rules related to significant wetlands. This finding is supported by finding 71, below.

71. No wetlands within or immediately adjacent to the Project areas have been identified. Therefore, no undue adverse impacts to wetlands will result from the Project. Tomberg pf. at 9;

exh. VELCO-Tomberg-2 at 10.

**Sufficiency of Water and Burden on Existing Water Supply**

[10 V.S.A. §§ 6086(a)(2)&(3)]

72. The Project will not cause an unreasonable burden on existing water supplies. This finding is supported by finding 73, below.

73. The Project will not involve expansion or development of any additional water supplies at any of the facilities, and will not have an undue, adverse effect on existing water supplies. Tomberg pf. at 10; exh. VELCO-Tomberg-2 at 10.

**Soil Erosion**

[10 V.S.A. § 6086(a)(4)]

74. The Project will not cause unreasonable soil erosion or reduce the capacity of the land to hold water. This finding is supported by finding 75, below.

75. Work activities at two sites (Coolidge and Vernon Substations) are covered under Vermont construction stormwater authorization (3653-INDC & 5942-9020), which will be updated as needed to reflect this new work. As work at the New Haven Substation will be limited to the gravel substation yard and be below the one-acre permitting threshold, VELCO does not anticipate needing erosion or construction stormwater discharge permits. Nevertheless, VELCO will perform the work in accordance with the environmental impact and minimization measures outlined in the VEGM. Specifically this manual includes information pertaining to installation of EPSC preventative measures, monitoring and maintenance, and information regarding inspections and proactive actions to be taken to address areas that present significant erosion potential. As such, there will be no undue or adverse impacts from soil erosion as a result of the Project. Tomberg pf. at 10; exh. VELCO-Tomberg-2 at 10-11.

**Transportation Systems**

[10 V.S.A. § 6086(a)(5)]

76. The Project will not cause unreasonable congestion or unsafe conditions with respect

to the use of existing or proposed transportation systems. This finding is supported by finding 77, below.

77. There should be no long-term traffic impacts from the Project, and only minor short-term traffic impacts due to deliveries of Project equipment to the substation sites during the construction period (expected to be September, 2011 through May, 2012). Such deliveries will use existing roads with vehicles that are commonly used on such public roads. Ostrander pf. at 13.

#### **Educational and Municipal Services**

[10 V.S.A. § 6086(a)(6)&(7)]

78. The Project will not have any impact on educational or municipal services. Ostrander pf. at 13; Schuyler pf. at 24.

#### **Aesthetics, Historic Sites and Rare and Irreplaceable Natural Areas**

[10 V.S.A. § 6086(a)(8)]

79. T. J. Boyle Associates prepared an aesthetic analysis report for the Project, which relied on the firm's extensive involvement with the permitting and construction of all three of these substations in recent years. T. J. Boyle Associates determined the locations from which public views of the Project equipment might be possible and evaluated impacts by reviewing Project design plans and details, topographic maps, and aerial photos and compared the information against available views. Ostrander pf. at 11.

80. Based on T. J. Boyle Associates' analysis, the visual impacts of the Project will not be adverse because:

- Project upgrades at all three sites will consist of minimal incremental increases of equipment within existing substations.
- Potential public viewing locations are very limited for each location.
- Proposed equipment and/or grey sound walls (if required for noise mitigation) will be of similar character and color as existing equipment.
- Existing and approved mitigation at all three locations will equally mitigate

proposed Project upgrades.  
Ostrander pf. at 11-12, exh. VELCO-Ostrander-15.

81. The New Haven, Coolidge and Vernon Substations are not located on state or federal registered historic sites, and there will be no impacts on any Historic Sites. In addition, VELCO previously had these three facilities archeologically assessed, with professional archeologists reviewing the three substation sites as part of previous Section 248 reviews and Section 106 review under the Army Corps of Engineers permitting efforts. These prior assessments identified no Historic Sites in the Project area. Tomberg pf. at 3-4; exhs. VELCO-Tomberg 3, VELCO-Tomberg-4 and VELCO-Tomberg-5.

82. The Project will have no adverse impacts on rare and irreplaceable natural areas. Tomberg pf. at 11; exh. VELCO-Tomberg-2 at 11-12.

### **Discussion**

Based on the above findings, I find that the proposed project will not have an undue adverse effect on the aesthetics or scenic and natural beauty of the area. In reaching this conclusion, I rely on the Environmental Board's methodology for determination of "undue" adverse effects on aesthetics and scenic and natural beauty as outlined in the so-called Quechee Lakes decision. Quechee Lakes Corporation, 3W0411-EB and 3W0439-EB, dated January 13, 1986.

As required by this decision, it is first appropriate to determine if the impact of the project will be adverse. The project would have an adverse impact on the aesthetics of the area if its design is out of context or not in harmony with the area in which it is located. If it is found that the impact would be adverse, it is then necessary to determine that such an impact would be "undue." Such a finding would be required if the project violates a clear written community standard intended to preserve the aesthetics or scenic beauty of the area, if it would offend the sensibilities of the average person, or if generally available mitigating steps would not be taken to improve the harmony of the project with its surroundings. The Board's assessment of whether a particular project will have an "undue" adverse effect based on these standards should be

significantly informed by the overall societal benefits of the project.<sup>2</sup>

As the above findings indicate, the Project is to be constructed within the existing footprints of VELCO's substations in Ludlow, Vernon, and New Haven. Although the Project will result in the addition of some large pieces of equipment within those existing substations, the record shows that these additions are not intrusive or adverse, and will not add significantly to the existing visual impact of those facilities. Although noise levels have been raised as a concern in this docket, VELCO's preliminary tests of noise indicate that the Project will not result in any noticeable increases in sound pressure. VELCO has agreed to conduct additional pre-construction noise level tests, and to also conduct post-construction tests prior to the first snowfall, so as to avoid the damping affects of the snow.<sup>3</sup> In the event that post-construction noise levels are shown to be adverse, VELCO should be required to implement appropriate mitigation techniques to reduce noise to acceptable levels.

Therefore, I conclude that the aesthetics impacts of the Project will not be adverse.

**Necessary Wildlife Habitat**  
[10 V.S.A. § 6086(8)(A)]

83. VELCO has previously reviewed each substation site as part of the NRP and SLP resource assessments and associated agency consultations. As part of this effort, VELCO Environmental consultants conducted a review of the Vermont Center for Geographic Information-hosted ("VCGI") ANR online database for Element Occurrences ("EO"), obtained information from the U.S. Fish and Wildlife, Non-Game and Natural Heritage Program ("NNHP"), and performed necessary field surveys of the Project areas. Although EOs and natural communities were mapped near the Vernon and New Haven Substations, there were no identified Significant Natural Communities, or rare, threatened or endangered species within or proximate to the Project areas. As such, there will be no undue adverse effects to threatened or endangered species, or necessary wildlife habitat as a result of the Project. Tomberg pf. at 11; exh. VELCO-Tomberg-2 at 11-12.

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2. Docket 6884, Order of 4/21/04 at 20-21.

3. Tr. 9/2/11 at 12-14 (Kaliski).

**Development Affecting Public Investments**

[10 V.S.A. § 6086(a)(9)(K)]

84. The Project will not negatively impact any public or quasi-public investment in any facility, service, or lands, or materially jeopardize or interfere with the function, efficiency, or safety of, or the public's use or enjoyment of or access to any facility, service, or lands.

Ostrander pf. at 14.

**Public Health and Safety**

[30 V.S.A. § 248(b)(5)]

85. VELCO will construct the Project in accordance with National Electric Safety Code requirements. The Petitioner represents that it will use high-quality materials and adhere to prudent utility construction practices throughout the construction phase. The Project will not unnecessarily or unreasonably endanger the public or adjoining landowners. *Id.*

**Least-Cost Integrated Resource Plan**

[30 V.S.A. § 248(b)(6)]

86. While VELCO does not have an integrated resource plan, the Project complies with VELCO's 2009 Vermont Transmission System 10-Year-Long-Range Plan Analysis. Ostrander pf. at 15.

**Compliance with Electric Energy Plan**

[30 V.S.A. § 248(b)(7)]

87. Vermont's Twenty-Year Electric Plan (the "Plan"), adopted by the Department in January of 2005, sets forth several basic objectives that must be satisfied in serving the public interest. When utilities design and implement long-range resource plans, the Plan requires them to strive to meet Vermont's electric energy needs in a manner that is "efficient, adequate, reliable, secure, sustainable, affordable, safe, and environmentally sound, while encouraging the state's economic vitality and maintaining consistency with other state policies." Utilities must "carefully balance" these objectives. The Project strikes the proper balance among each of these objectives. *Id.*

88. On March 21, 2011, the Petitioner requested a determination from the Department, pursuant to 30 VSA § 202(f), that the Project is consistent with the electrical energy plan for the



state. *Id.*

89. On October 13, 2011, the Department filed a letter stating that the proposed project is consistent with the Vermont Twenty-Year Electric Plan, pursuant 30 V.S.A. § 202(f), provided the Project is constructed as described by VELCO.

#### **Outstanding Resource Waters**

[30 V.S.A. § 248(b)(8)]

90. The Project is not located near and will have no effect on any outstanding resource waters. Tomberg pf. at 4; exh. VELCO-Tomberg-2 at 5.

#### **Waste-to-Energy Facilities**

[30 V.S.A. § 248(b)(9)]

91. The Project does not involve a waste to energy facility.

#### **Existing or Planned Transmission Facilities**

[30 V.S.A. § 248(b)(10)]

92. Existing transmission facilities can serve the Project without creating an undue adverse effect on Vermont utilities and customers. The proposed shunt reactors will be installed at existing substations and the Project is designed to enhance the existing utility system and to improve service to customers. In addition, the proposed installation of shunt reactors will not result in any adverse impact on distribution utility line workers. Ostrander pf. at 16.

#### **IV. CONCLUSION**

Based upon all the above evidence, and with the conditions I recommend that the Board include as part of the approval of the Project, I conclude that the Project:

(a) will not unduly interfere with the orderly development of the region with due consideration having been given to the recommendations of the municipal and regional planning commissions, and the recommendations of the municipal legislative bodies;

- (b) is required to meet the need for present and future demand for service which could not otherwise be provided in a more cost-effective manner through energy conservation programs and measures and energy efficiency and land management measures;
- (c) will not adversely affect system stability and reliability;
- (d) will result in an economic benefit to the state and its residents;
- (e) will not have an undue adverse effect on aesthetics, historic sites, air and water purity, the natural environment and the public health and safety, with due consideration having been given to the criteria specified in 10 V.S.A. § 1424a(d) and §§ 6086(a)(1) through (8) and (9)(K);
- (f) is consistent with the principles of least-cost integrated resource planning;
- (g) is in compliance with the electric energy plan approved by the Department under § 202 of Title 30 V.S.A.;
- (h) does not involve a facility affecting or located on any segment of the waters of the State that has been designated as outstanding resource waters by the Water Resources Board;
- (i) does not involve a waste-to-energy facility; and
- (j) can be served economically by existing or planned transmission facilities without undue adverse effect on Vermont utilities or customers.

Pursuant to the MOU between all parties to this proceeding, the Parties have waived their rights under 3 V.S.A. § 811 to file written comments or present oral argument with respect to this proposal for decision, provided that this proposal for decision is substantially in the form as that agreed to by the Parties. Because this proposal for decision is substantially in the agreed-upon form, it has not been circulated to the parties.

Dated at Montpelier, Vermont this 14th day of October, 2011.

s/Jay E. Dudley

Jay E. Dudley  
Hearing Officer

### **V. Board Discussion**

We accept and adopt the Hearing Officer's findings, recommendations, and conclusion; however, we remain concerned regarding the potential for increased noise levels at the substations, post-construction, and whether or not the increase in noise, if any, can be effectively mitigated by VELCO. Our concerns on this issue are in part prompted by the ongoing experience with elevated noise levels at VELCO's Granite Substation in Williamstown, Vermont (Docket No. 6860). In that docket, post-construction noise emitted by the phase-shifting transformer turned out to be much greater than originally anticipated. In approving the present Petition, it is our expectation that a similar issue will not arise here with the proposed Project. In the event that elevated noise levels result from the installation and operation of the shunt reactors, the Board reserves the authority to require VELCO to initiate noise-suppression and mitigation techniques to reduce noise to pre-construction levels.

### **VI. ORDER**

IT IS HEREBY ORDERED, ADJUDGED AND DECREED by the Public Service Board ("Board") of the State of Vermont that:

1. The findings, conclusions, and recommendations of the Hearing Officer are adopted.
2. The proposed installation by Vermont Electric Power Company, Inc. and Vermont Transco LLC (collectively known as "VELCO") of two variable shunt reactors at the Coolidge Substation in Ludlow, Vermont, the installation of one variable shunt reactor at the New Haven Substation in New Haven, Vermont, and the relocation of an existing static shunt reactor from the New Haven Substation to the Vernon Substation in Vernon, Vermont (the "Project"), all in accordance with the evidence and plans presented in this proceeding, will promote the general good of the State of Vermont in accordance with 30 V.S.A. Section 248, and a certificate of public good shall be issued in the matter.
3. Prior to proceeding with construction, VELCO shall obtain all necessary permits and approvals. Construction, operation, and maintenance of the proposed Project shall be in accordance with such permits and approvals, and with all other applicable regulations, including those of the Vermont Agency of Natural Resources ("ANR") and the U.S. Army Corps of

Engineers.

4. VELCO shall perform pre-construction noise studies and post-construction noise studies after it commissions the reactors at each substation for comparability of noise levels. VELCO shall mitigate noise levels if post-construction studies find substantially higher noise levels than currently exist at the sites. Prior to conducting the pre-construction and post-construction noise studies, VELCO's noise expert shall consult with the noise expert for the Department of Public Service ("Department") regarding the content and methodology of those studies. The studies shall be sufficient to assess the extent of tonal noise and the total noise from the substations. All post-construction noise studies shall be conducted after fall foliage season but prior to the first substantial snowfall so as to avoid the dampening affects of both the foliage and snow cover. VELCO shall report the results of its studies to both the Board and the Department once the studies are completed. In the event noise from operation of the Project significantly exceeds pre-construction levels, the Board retains the authority to require VELCO to initiate noise-supression and mitigation techniques to reduce noise to pre-construction levels.

5. Blasting associated with construction of the Project at the Coolidge Substation shall be minimized to the extent practicable and performed only during the hours of 9:00 A.M. to 5:00 P.M. Monday through Friday, with no blasting allowed on state holidays.

6. All blasting shall be carried out by licensed and certified blasting technicians. All blasting shall be performed in accordance with any and all applicable laws and regulations, including, but not limited to, U.S. Department of Interior Rules 816.61-68 and 817.61-68 and the Blasting Guidance Manual, Office of Surface Mining, Reclamation and Enforcement, U.S. Department of Interior, to limit peak particle velocity and ground vibration to safe levels. Noise and air blast effects shall be limited through application of proper techniques and blasting mats shall be used where needed to limit the occurrence of flyrock.

7. Prior to performing any blasting at the Coolidge Substation, VELCO shall develop a blasting plan that includes pre-blast surveys of wells and structures within the prescribed blast radius of one-half mile and shall arrange for a public information session with surrounding landowners to address concerns related to blasting.

8. VELCO shall send a certified letter, with return receipt requested, to each property owner within one-half mile of the blast area that explains why pre- and post-blast surveys and well monitoring is being offered and provide the contact information for a person that is able to answer questions that property owners may have regarding the notice and surveys.

9. In the event surrounding landowners express concern regarding the impacts of blasting on wells or other structures on their property, VELCO shall perform evaluations to determine if any damage has occurred as a result of blasting activities and if so, remediate any such damage caused by blasting activities.

10. VELCO shall conduct both pre-construction and post-construction well-water tests within the one-half mile blast radius to test for lead contaminants and byproducts, for those property owners who request and consent to such an analysis. VELCO shall provide copies of the results of those tests to the Board, the Department, and ANR. VELCO shall also certify by letter to the Board and the Department that VELCO has complied with the terms of its blasting plan and, after blasting and mitigation, if any, are completed, VELCO shall report to the Board and the Department on the results of its blasting at the Coolidge site.

11. Any water to be used for dust-suppression purposes must be brought in from off-site.

Dated at Montpelier, Vermont, this 14th day of October, 2011.

<u>s/James Volz</u>	)	
	)	PUBLIC SERVICE
	)	
<u>s/David C. Coen</u>	)	BOARD
	)	
	)	OF VERMONT
<u>s/John D. Burke</u>	)	

OFFICE OF THE CLERK

FILED: October 14, 2011

ATTEST: s/Judith C. Whitney  
Deputy Clerk of the Board

*NOTICE TO READERS: This decision is subject to revision of technical errors. Readers are requested to notify the Clerk of the Board (by e-mail, telephone, or in writing) of any apparent errors, in order that any necessary corrections may be made. (E-mail address: psb.clerk@state.vt.us)*

*Appeal of this decision to the Supreme Court of Vermont must be filed with the Clerk of the Board within thirty days. Appeal will not stay the effect of this Order, absent further Order by this Board or appropriate action by the Supreme Court of Vermont. Motions for reconsideration or stay, if any, must be filed with the Clerk of the Board within ten days of the date of this decision and order.*